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# PEOPLE'S REPUBLIC OF CHINA SCIENTIFIC ABSTRACTS

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PROGRESS IN BIOCHEMISTRY AND BIOPHYSICS

AUTHORS: HSIAO Yueh-mei [5618 1878 2734]  
SHIH Yuan-fu [2508 0337 3940]

ORG: Both of Fifth Laboratory, Institute of Biophysics, Chinese Academy of Sciences

TITLE: "Histological Structure of Green Frog's Visual Parietal Operculum"

SOURCE: Peking SHENG-WU HUA-HSUEH YU SHENG-WU WU-LI CHIN-CHAN [PROGRESS IN BIOCHEMISTRY AND BIOPHYSICS] in Chinese No 2, Apr 78 pp 1-4

ABSTRACT: Microscopic observations on sections of visual parietal operculum of green frogs (*Rana nigromaculata*) shows that: 1) the tissue is of a delamination structure that consists of 9 layers with the epithelial layer (from 7th to 9th layers) further subdivided into 7 layers; 2) there are 5 cell types, namely: pyramidal, multipolar, bipolar and stellate neurons, and ependymal glial cells; and 3) there is definite characteristic distribution of the dendrites and the axons. The sagittal, horizontal, coronary and slant sectioning techniques, and the hematoxylin-eosin and fast Golgi staining methods were adopted in various cases. This paper was received for publication on 6 September 1977.

AUTHORS: WU Ch'i-chiu [0702 1142 0036]  
LI Chun-feng [2621 0193 7685]  
HSIAO Yueh-mei [5618 1878 2734]

ORG: All of Fifth Laboratory, Institute of Biophysics, Chinese Academy of Sciences

TITLE: "A Study on the Visual Center Localization of Green Frogs"

SOURCE: Peking SHENG-WU HUA-HSUEH YU SHENG-WU WU-LI CHIN-CHAN [PROGRESS IN BIOCHEMISTRY AND BIOPHYSICS] in Chinese No 2, Apr 78 pp 4-7

ABSTRACT: Microscopic observations on brain sections of green frogs (*Rana nigromaculata*) confirm the existence of exuviated terminal vagina fibrosa at the visual parietal operculum, the Bellonci nucleus, the anterior parietal operculum neuron network, and the mesencephalon operculum, where visual centers at the anterior, posterior, middle and lateral sections are located. The correspondence relationship between the visual reticular membrane at different limit of perspective and the visual centers is also established and discussed.

This paper was received for publication on 6 September 1977.

AUTHOR: None

ORG: Cell Research Group, Shanghai Institute of Experimental Biology  
Third Laboratory

TITLE: "Extraction of Rat Liver and Calf Thymus Chromatin Nonhistones  
and Their Activation of Template Activity"

SOURCE: Peking SHENG-WU HUA-HSUEH YU SHENG-WU WU-LI CHIN-CHAN [PROGRESS  
IN BIOCHEMISTRY AND BIOPHYSICS] in Chinese No 2, Apr 78 pp 8-13

ABSTRACT: Chromatin nonhistones in rat liver and calf thymus were first completely removed of their DNA contents by a combined ammonium sulfate and streptomycin sulfate process, and then successfully separated by either hydroxyapatite column or QAE-Sephadex A-50 column. The chromatin nonhistones so extracted exhibit distinct activation on the activity of DNA templates. Observation on their polyacrylamide gel electrophoretograms indicates that the chromatin nonhistones from either the rat liver or the calf thymus have both common constituents as well as individually singular constituents.

This paper was received for publication on 9 August 1977.

AUTHORS: SHIH Yung-te [2457 3057 1795]  
LIANG Tzu-chun [2733 1311 6874]

ORG: Both of Biophysics Teaching and Research Section, First Shanghai  
Medical College

TITLE: "Conditions and Influential Factors of Cell Electrophoretic  
Measurement"

SOURCE: Peking SHENG-WU HUA-HSUEH YU SHENG-WU WU-LI CHIN-CHAN [PROGRESS  
IN BIOCHEMISTRY AND BIOPHYSICS] in Chinese No 2, Apr 78 pp 13-19

ABSTRACT: Continuing a previous report on the development of a square capillary cell electrophoresis apparatus for medical cell research, noted for its simple operation and low required sample, the authors discuss the conditions and influential factors in such cell electrophoresis measurement, namely: 1) the rate of electrophoresis-depth curves of different mediums; 2) the stationary layer and the measurement layer; 3) the electrodes; 4) the voltage and the voltage gradient; 5) the relationship between current intensity and ionic concentration; 6) the concentration of blood corpuscles; 7) the temperature and viscosity; 8) the ion concentration in salt bridge; 9) measurement of rate of electrophoresis of red blood corpuscles and blood plaques in blood plasma; and 10) some of its application in medicine. Paper received on 4 Dec 76.

AUTHOR: None

ORG: Chinese Academy of Sciences Institute of Biophysics, Fourth Laboratory Ultracentrifuge Research Group and Peking Medical Instrument Repair Plant

TITLE: "Model CL-60 Preparative Ultracentrifuge"

SOURCE: Peking SHENG-WU HUA-HSUEH YU SHENG-WU WU-LI CHIN-CHAN [PROGRESS IN BIOCHEMISTRY AND BIOPHYSICS] in Chinese No 2, Apr 78 pp 20-25

ABSTRACT: This article introduces the principles, specifications, construction, performance and tests of the newly developed, automatically controlled model CL-60 preparative ultracentrifuge for biological, chemical and medical research and industrial separation of preparative samples. The ultracentrifuge has a maximum speed of 60,000 r.p.m., a maximum centrifugal acceleration of 328,000 x g, and can operate continuously for two hours.

This paper was received for publication on 11 August 1977.

AUTHOR: LIN K'o-ch'un [2651 0344 2797]

ORG: Peking Medical College

TITLE: "Quantum Biology"

SOURCE: Peking SHENG-WU HUA-HSUEH YU SHENG-WU WU-LI CHIN-CHAN [PROGRESS IN BIOCHEMISTRY AND BIOPHYSICS] in Chinese No 2, Apr 78 pp 26-33

ABSTRACT: The author introduces the newly developed science of quantum biology, that applies the theoretical conceptions and methods of quantum mechanics to study such life processes as the force of interaction between molecules, the electronic structure and reaction activity of biological molecules, the configuration and functions of biological macromolecules, and their singular actions and identifying mechanisms. To illustrate its significance, modern research on nucleic acids, proteins and carcinogenic aromatic hydrocarbons is finally reviewed.

This paper was received for publication on 10 January 1978.

AUTHOR: CHENG Kuo-ch'ang [6774 0948 9376]

ORG: Department of Biology, Lanchow University

TITLE: "Application of Cell Engineering To Genetics and Breeding"

SOURCE: Peking SHENG-WU HUA-HSUEH YU SHENG-WU WU-LI CHIN-CHAN [PROGRESS IN BIOCHEMISTRY AND BIOPHYSICS] in Chinese No 2, Apr 78 pp 33-40

ABSTRACT: The author reviews recent cell engineering research concerned with genetics and breeding in genes, chromosomes, chromosome complements, cytoplasm and cell fusion. A discussion is finally made on the prospect and problems in the research on the conversion of higher order plants, nitrogen fixation, genetics of plant molecules, culture of "engineering plants", and culture and preservation of plant cell asexual multiplication lines. Some technical problems encountered in the author's research process are also listed.

This paper was received for publication on 29 August 1977.

AUTHOR: None

ORG: Fourth Laboratory, Shanghai Institute of Biochemistry, Chinese Academy of Sciences

TITLE: "Micropore Filter Membrane and Its Application in Isotopes (II)"

SOURCE: Peking SHENG-WU HUA-HSUEH YU SHENG-WU WU-LI CHIN-CHAN [PROGRESS IN BIOCHEMISTRY AND BIOPHYSICS] in Chinese No 2, Apr 78 pp 41-45

ABSTRACT: Continuing a previous section of the article on micropore filter membranes, this section of the article deals with the principles of liquid scintillation counting of micropore filter membrane in inhomogeneous and homogeneous systems, emulsions and suspensions, and the technical problems concerned in the determination of radioactive  $^3\text{H}$  and  $^{14}\text{C}$  tracers. Its application in the determination of cAMP, radioactive immunization and DNA in combination with proteins, and mRNA and RNA/DNA in combination with nucleic acids, as well as in collection and other research are also introduced.

This paper was received for publication on 8 June 1977.



AUTHOR: None

ORG: Biochemistry Research Section, Lanchow Institute of Biochemical Preparations

TITLE: "Zone Electrophoresis Techniques (II)"

SOURCE: Peking SHENG-WU HUA-HSUEH YU SHENG-WU WU-LI CHIN-CHAN [PROGRESS IN BIOCHEMISTRY AND BIOPHYSICS] in Chinese No 2, Apr 78 pp 46-47

ABSTRACT: Continuing a previous section of the article on zone electrophoresis techniques, this section of the article deals with the acetate cellulose membrane electrophoresis techniques that include: 1) the principle; 2) the apparatus; 3) the preparation of acetate cellulose membranes; 4) the buffer solutions; 5) the samples; 6) the procedure of electrophoresis; and 7) the final colorimetry. A discussion is finally made on the advantages of the technique, and some precautions that should be taken. The article is to be continued.

AUTHOR: None

ORG: Cell Research Group, Third Laboratory, Shanghai Institute of Experimental Biology

TITLE: "Ultraviolet Absorption Spectral Analysis of Histones"

SOURCE: Peking SHENG-WU HUA-HSUEH YU SHENG-WU WU-LI CHIN-CHAN [PROGRESS IN BIOCHEMISTRY AND BIOPHYSICS] in Chinese No 3, Jun 78 pp 1-5

ABSTRACT: Ultraviolet absorption spectral analysis of histones, on the basis of E. W. Jones' and D. Oliver's techniques, shows that the absorption spectra of all the components of histones has the common characteristics of having an absorption peak at 275 mμ, and a "scapular" at 280 mμ; and, despite the singularity of the absorption spectra for each individual components, there exists a corresponding relationship to the content of basic amino acids, from which the content of basic amino acids in F<sub>2a2</sub> is deducted as being 19.2%.

This paper was received for publication on 11 April 1977.

AUTHORS: KUNG Tsu-hsun [7895 4371 1053]  
SHEN Chu-ying [3088 5468 5391]

ORG: Both of Shanghai Institute of Biochemistry, Chinese Academy of Sciences

TITLE: "Electron Microscopic Refrigerated Specimen Preparation Technique  
-- Refrigerated Ultramicrotomy"

SOURCE: Peking SHENG-WU HUA-HSUEH YU SHENG-WU WU-LI CHIN-CHAN [PROGRESS  
IN BIOCHEMISTRY AND BIOPHYSICS] in Chinese No 3, Jun 78 pp 5-14

ABSTRACT: The ultramicrotomy techniques introduced cover the entire process of specimen preparation that include fixing with glutaric aldehyde, embedment in gelatin, methyl cellulose, and bovine serum albumin, anti-freeze treatment with sucrose, glucose, dimethyl sulfoxide and glycerine, direct and indirect freezing technique, dry and wet sectioning technique, and staining, as well as all the optimal conditions involved. A discussion is finally made on its application to the study of histological and cytological microstructures, cytochemical and immunochemical research, study of certain specific specimens, inorganic ionic microanalysis, and radiological self-development techniques, and their existing problems. This paper was received for publication on 3 June 1977.

AUTHORS: KUO Yao-chun [6753 1031 0689]  
LEI K'o-chien [7191 0344 0256]

ORG: Both of Institute of Biophysics, Chinese Academy of Sciences

TITLE: "Determination of Fluorescent Quantum Yield"

SOURCE: Peking SHENG-WU HUA-HSUEH YU SHENG-WU WU-LI CHIN-CHAN [PROGRESS  
IN BIOCHEMISTRY AND BIOPHYSICS] in Chinese No 3, Jun 78 pp 14-17

ABSTRACT: The authors discuss the principal problems concerned in the determination of fluorescence quantum yield by the relative quantum yield method, where the area and the optical density of excited wavelengths of true emission spectra of specimens determined by fluorescence spectrophotometer and ultraviolet spectrophotometer respectively are compared with those of known standards. The problems discussed include: 1) selection of fluorescence standards; 2) calibration of emission spectra and precise determination of the emission spectrum area of the standards and the specimens; 3) concentration; 4) excited wavelengths; 5) temperature; and 6) selection of solvents. The quantum yields of 22 substances so determined in different solvents are tabulated. This paper was received for publication on 21 September 1977.

AUTHORS: T'IEN Ching-sheng [3944 4544 3932]  
HSU Hsin-lai [1776 2450 0171]  
CH'EN Ts'ai-ch'in [7115 6846 3830]  
FAN Jung [2868 5554]  
LI Yu-huan [2621 3768 3883]

ORG: T'IEN and HSU of Peking Institute of Tumor Control, and CH'EN, FAN and LI of Chinese Academy of Sciences, Institute of Biophysics

TITLE: " Preliminary Analysis of Human Lymph Cell Cycle by BUdR-Giemsa Sister Chromatid Differentiation Staining Technique"

SOURCE: Peking SHENG-WU HUA-HSUEH YU SHENG-WU WU-LI CHIN-CHAN [PROGRESS] IN BIOCHEMISTRY AND BIOPHYSICS] in Chinese No 3, Jun 78 pp 18-20

ABSTRACT: Korenberg, Freedlender et al simplified BUdR-Giemsa's sister chromatid differentiation staining technique was adopted to a study of human lymph cell cycles. It was observed that although most of the human lymph cell cycles were completed within 48 hours with about 35% of the cells entering their second fission, there were still about 28% of the cells remained in the first fission, and 25% of the cells entered the third fission after 72 hours.  
This paper was received for publication on 3 February 1978.

AUTHOR: None

ORG: Distributive Metabolism Research Group, Fifth Laboratory, Shanghai Institute of Biochemistry, Chinese Academy of Sciences

TITLE: "Preparation of 2,5-Diphenyl Oxazole"

SOURCE: Peking SHENG-WU HUA-HSUEH YU SHENG-WU WU-LI CHIN-CHAN [PROGRESS IN BIOCHEMISTRY AND BIOPHYSICS] in Chinese No 3, Jun 78 pp 21-23

ABSTRACT: 2,5-diphenyl oxazole (PPO), an organic fluorescence scintillation agent for liquid scintillation determination, was prepared by bromination of acetophenone, addition of hexamine in concentrated hydrochloric acid and absolute alcohol, conversion and condensation with benzoyl chloride in sodium acetate and glacial acetic acid, and final cyclization in concentrated sulfuric acid at 50°C. The bromination was conducted by aqueous heterogenous reactions according to a Tientsin Nan-k'ai University recommendation, and the conversion was conducted in one step in absolute alcohol based on the experience of Shanghai Reagent Plant. The process was simpler, although the yield was 30%, and the quality as good as those imported.

This paper was received for publication on 5 August 1977.

AUTHOR: None

ORG: This Journal

TITLE: "Convention Summary"

SOURCE: Peking SHENG-WU HUA-HSUEH YU SHENG-WU WU-LI CHIN-CHAN [PROGRESS IN BIOCHEMISTRY AND BIOPHYSICS] in Chinese No 3, Jun 78 p 23

ABSTRACT: A convention on insulin research and application, sponsored by the First Bureau of the Chinese Academy of Sciences was reportedly convened at Nan-ning on 15-21 March 1978; more than 30 concerned units throughout China participated. Besides reviews and advances in insulin research in China that include the isolation of a new protein of lower molecular weight, the discovery of insulin receptors in cells, some study on the structures of insulin and their functions, and others, the convention reported also some advances in insulin research and applications abroad, and the successful application of insulin in the treatment of diabetes in China. An overall three-year coordinated insulin research program on the basic theories of insulin was finally approved.

AUTHOR: HSIEH Yen-po [6200 1750 0590]

ORG: Biochemistry Laboratory, Peking Institute of Biological Preparations

TITLE: "Research on the Structure and Function of Immunoglobulin"

SOURCE: Peking SHENG-WU HUA-HSUEH YU SHENG-WU WU-LI CHIN-CHAN [PROGRESS IN BIOCHEMISTRY AND BIOPHYSICS] in Chinese No 3, Jun 78 pp 24-30

ABSTRACT: The author reviews recent research concerned with the structure and function of immunoglobulin that includes: 1) the first order structure of immunoglobulin; 2) the higher order structure of immunoglobulin; and 3) the relationship between the functional zones of immunoglobulin and biological activity in terms of the combined antigenic action of  $V_L$  and  $V_H$ , the antigenicity of immunoglobulin, and the other functions of immunoglobulin.

This paper was received for publication on 28 July 1977.

AUTHOR: LI Kuo-tung [2621 0948 2767]

ORG: Institute of Physics, Chinese Academy of Sciences

TITLE: "Development of Application of Biological Magnetism (I)"

SOURCE: Peking SHENG-WU HUA-HSUEH YU SHENG-WU WU-LI CHIN-CHAN [PROGRESS IN BIOCHEMISTRY AND BIOPHYSICS] in Chinese No 3, Jun 78 pp 31-34

ABSTRACT: Following a review on the development of biological magnetism from as early as 475 B.C. in China, and 200 B.C. in Greece, when magnet had been used in medical treatment, to the 1876-1960 period when magnetic field was subjected to more intensive biological research and industrial and agricultural applications with the availability of such newer technique as strong magnetic field, magnetic resonance, and highly precise sensitive magnetometer, and the present development of the full scope of biological magnetism, the author discusses the growing application of biological magnetism in agriculture, notably in China, that includes treating crops in magnetic field, soaking seeds in magnetized water, use of magnetic fertilizer, and adoption of magnetic examination technique and instruments. The article is to be continued.

This paper was received for publication on 19 July 1977.

AUTHOR: TS'AI Hui-lo [5591 1920 5012]

ORG: Cytology Laboratory, Institute of Zoology, Chinese Academy of Sciences

TITLE: "Application of Laser Raman Spectrum in Biological Research"

SOURCE: Peking SHENG-WU HUA-HSUEH YU SHENG-WU WU-LI CHIN-CHAN [PROGRESS IN BIOCHEMISTRY AND BIOPHYSICS] in Chinese No 3, Jun 78 pp 35-40

ABSTRACT: The author discusses how the incorporation of laser as a light source to Raman spectrum has now been applied successfully to research on biological macromolecular polypeptides, proteins, lipids and biological membranes, as well as living cells, as a means to detect the changes in configuration in solution and their relations to functions, and fast identification of the types of cells. It is reported that China is now developing a laser Raman spectrophotometer for advanced biological research.

This paper was received for publication on 10 December 1976.

AUTHOR: None

ORG: Biochemistry Research Group, Lanchow Institute of Biological Preparations

TITLE: "Zone Electrophoresis Technique (III)"

SOURCE: Peking SHENG-WU HUA-HSUEH YU SHENG-WU WU-LI CHIN-CHAN [PROGRESS IN BIOCHEMISTRY AND BIOPHYSICS] in Chinese No 3, Jun 78 pp 47-48

ABSTRACT: Continuing two previous articles on zone electrophoresis techniques, this article introduces the technique of starch gel electrophoresis that includes: 1) the construction, specifications and performance of Chinese-made model DY-1 electrophoresis apparatus; 2) the preparation of starch gel, buffer solutions, gel membrane and gel holding plates; 3) the addition of samples; 4) the technique of electrophoresis; 5) the development of color; and 6) some examples of its resolution of serum proteins, enzymes and lower molecular proteins. The article is to be continued.

AUTHOR: None

ORG: This Journal

TITLE: "Conversion Process of Virus-infected Cells"

SOURCE: Peking SHENG-WU HUA-HSUEH YU SHENG-WU WU-LI CHIN-CHAN [PROGRESS IN BIOCHEMISTRY AND BIOPHYSICS] in Chinese No 3, Jun 78 p 48

ABSTRACT: This article reports the appearance of three conversion stages of virus-infected cells as observed from scanning electron microscope, namely: 1) development of upward processes from cell membranes in 1-3 hours; 2) cells become spindle-like with appearance of traction fibers in 2-12 hours; and 3) cells become spherical and covered with aveolus in 12-24 hours. The causes of such external changes could be due to the influence of some products of certain virus genes, but is still inconclusive.

AUTHORS: LI Wen-chien [2621 2429 4675]  
TING Sheng-ta [0002 0524 1129]

ORG: Both of Microbiology Teaching and Research Laboratory, First  
Military Medical University

TITLE: "Introducing Two Self-constructed Simple Cell Electrophoresis  
Apparatus (Continued)"

SOURCE: Peking SHENG-WU HUA-HSUEH YU SHENG-WU WU-LI CHIN-CHAN [PROGRESS  
IN BIOCHEMISTRY AND BIOPHYSICS] in Chinese No 3, Jun 78 p 49

ABSTRACT: To correct the defects of two simple self-constructed cell  
electrophoresis apparatus, namely: 1) a closed round capillary  
electrophoresis apparatus; and 2) an open rectangular flat electro-  
phoresis apparatus, as published in No 2, 1977 of this journal by the  
authors, some modifications are proposed that the capillaries will not  
be plugged up by gels in the former apparatus, and that the path of  
cell electrophoresis will not be inclined in the later apparatus.  
This paper was received for publication on 6 September 1977.

11,206

CSO: 4009

JOURNAL OF BOTANY

AUTHOR: None

ORG: Pedology Section, Kunming Institute of Botany

TITLE: "Zinc and White, Striped Disease of Corn Plant"

SOURCE: Peking CHIH-WU TSA-CHIH [JOURNAL OF BOTANY] in Chinese No 3, Jun 78  
pp 5-6

ABSTRACT: Zinc is a component in metal-containing enzymes, functioning in catalysis by these enzymes. When zinc is deficient in a plant, many plant enzymes fall off in activity and the normal metabolism of nitrogen and organic acids is inhibited; protein synthesis is hindered and zinc-deficiency diseases result. The main symptoms are seen in the whiteness of young seedlings 10 days after germination, white or light yellow leaves newly budding, and alternating yellow and green stripes showing up between leaf veins. This set of symptoms denotes the white and striped leaf disease. One consequence of the disease is premature withering of stalks or empty ears bearing no growing grains. The disease can be prevented with zinc fertilizers, like zinc sulfate, zinc oxide and zinc amide.

AUTHOR: None

ORG: Che-li-mu League Agricultural Research Institute, Kirin Province

TITLE: "Application of Petroleum Growth Compound in Haploid Seed Cultivation"

SOURCE: Peking CHIH-WU TSA-CHIH [JOURNAL OF BOTANY] in Chinese No 3, Jun 78  
pp 11 & 19

ABSTRACT: A petroleum-based growth-stimulating compound is isolated from oil refinery wastes; sodium naphthenate ( $C_{25}H_{50}COONa$ ) is the main component in the compound. This compound can stimulate plant growth by intensifying metabolism, quickening physiological and biochemical processes, augmenting photosynthesis and reducing respiration losses. In haploid seed selection, the petroleum growth-stimulating compound is added to culture medium, replacing catalyst and growth hormone. What results is that the plants have healthy roots, stems and leaves. The survival rate after transplanting is high. When diluted with water, the petroleum compound turns into a stable, milky emulsion.



AUTHOR: None

ORG: Seventh Section, Sixth Laboratory, Institute of Botany, Chinese Academy of Sciences; Paddy Rice Cultivation Laboratory and Paddy Rice Seed Breeding Laboratory, Kwangsi Agricultural Research Institute

TITLE: "Mutually Complementary Function of Chloroplasts and Hybrid Vigor of Crops"

SOURCE: Peking CHIH-WU TSA-CHIH [JOURNAL OF BOTANY] in Chinese No 3, Jun 78 pp 12-13 & 4

ABSTRACT: Photochemically, hybrid chloroplasts are often more active than either parent chloroplast. This phenomenon is called the mutually complementary function of chloroplasts. This function is seen in paddy rice, soya bean and corn. The yield of hybrid crop is proportional to the mutually complementary function and photosynthetic vigor. The article defines the efficiency (in percentage) of the mutually complementary function as equal to the quotient of the difference between the hybrid value and average parent value, divided by the average parent value. For rice varieties, the mutually complementary efficiency is 14.2 percent, for soya bean varieties it is 37.7 percent in one case and 61.4 percent in another. Diagrams explain how the mutual complementary efficiency is determined.

AUTHORS: WANG Ai-kuo [3769 1947 0948]  
KUO Chun-yen [6753 0193 1750]

ORG: Both of Physiological and Biochemical Research Laboratory, Kwangtung Provincial Institute of Botany

TITLE: "Mutual Chondriosome Complement of Hybrid Vigor"

SOURCE: Peking CHIH-WU TSA-CHIH [JOURNAL OF BOTANY] in Chinese No 3, Jun 78 pp 14-15

ABSTRACT: Plant chondriosomes is a kind of cell organelle, incorporating scores of vital enzymes. These enzymes release energy for plant growth. Since chondriosomes are vital in plant activity, their composition and function are related to growing conditions and growth prediction techniques in physiological biochemistry that are responsible for hybrid vigor. The oxidation activity of hybrid chondriosomes is higher than for either parent chondriosome; this phenomenon is referred to as hybrid vigor in chondriosomes and the mutually complementary function. The article describes how to determine the oxidation activity of chondriosomes. Current research on chondriosomes is briefly described.

AUTHORS: LI Cheng-li [2621 2973 3810]  
LI Mao-hsueh [2621 2021 1331]

ORG: None

TITLE: "How to Prepare Meiosis Pellets From Plant Cells"

SOURCE: Peking CHIH-WU TSA-CHIH [JOURNAL OF BOTANY] in Chinese No 3, Jun 78  
pp 18-19

ABSTRACT: During the reproductive growth stage of a plant and before macrospores and microspores are formed, sporonts subdivide, halving the number of chromosomes; this division is called meiosis. The meiosis pellets of microsporal sporonts are prepared by the steps of sampling, fixation, dyeing, pellet pressing and permanent storage of pellets. Adequate sampling times for wheat, corn, paddy rice and cotton are listed. Fixing agents are alcohol and glacial acetic acid, undiluted or with chloroform added. After fixing, dyeing is easier using one of certain dyestuffs, such as aniline red acetate.

AUTHOR: None

ORG: Hormone Section, Sixth Laboratory, Institute of Botany, Chinese Academy of Sciences

TITLE: "Biological Assaying of Plant Hormones (First Continuation)"

SOURCE: Peking CHIH-WU TSA-CHIH [JOURNAL OF BOTANY] in Chinese No 3, Jun 78  
pp 21-23

ABSTRACT: Biological assaying of growth hormones can be done by the cut section elongation technique, for wheat embryo saccules and by slicing for pea plant stems. The cut section can grow continuously while floating in a growth hormone solution, while both halves of sliced pea stem will curve inward in a hormone solution because the growth potential of the inner injured (due to slicing) side is restrained. Biological assaying of cell division hormone is described by chlorophyll retention in the cut section of wheat seedlings as it floats in hormone solution and by an increase in the fresh weight of the cut section of soya bean seedlings in the solution. When gibberelin is used in the biological assaying, the barley germplasma technique is employed because gibberelin can markedly increase the activity of the alpha-starch enzyme.

10,424  
CSO: 4009

GEOCHIMICA

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HSIEH Hsien-te [6200 0341 1795]  
WANG Tao-te [3769 6670 1795]

ORG: None

TITLE: "A Model for the Formation and Evolution of the Kirin Meteorite"

SOURCE: Peking TI-CH'IU HUA-HSUEH [GEOCHIMICA] in Chinese No 1, Mar 78 pp 1-11

TEXT OF ENGLISH ABSTRACT: Five stages can be recognized with respect to the evolution of the Kirin [Jilin] meteorite in the light of preliminary results available: (1) The stage of birth, fractionation and condensation of the solar nebula disc; (2) Formation of the parent body and thermal metamorphism; (3) Cooling of parent body and breaking up by impact; (4) Formation and orbiting of the Kirin meteor; (5) The falling of the meteor and the emergence of the meteorite shower.

The process and characteristics are discussed at some length for each of these stages.

AUTHOR: WANG Tao-te [3769 6670 1795]  
HSIEH Hsien-te [6200 0341 1795]

ORG: None

TITLE: "Thermal and Impact Metamorphism in the Kirin Meteorite"

SOURCE: Peking TI-CH'IU HUA-HSUEH [GEOCHIMICA] in Chinese No 1, Mar 78 pp 13-18

TEXT OF ENGLISH ABSTRACT: Preliminary investigation has been conducted on the thermal history of the Kirin [Jilin] meteorite with special reference to the criteria of thermal and impact metamorphism. The characteristics of thermal metamorphism are discussed in more detail for Meteorite No 1, which weighs about 1,770 kg and measures approximately  $100 \times 80 \times 50 \text{ cm}^3$ . Systematic sampling was carried out with respect to depth (i.e. 5, 20, 35 and 50 cm) from this meteorite. Microscopy, together with statistics of chondrule content and of the proportions between the various kinds of chondrules, shows that: (1) Chondrule content or the number of chondrule per unit area ( $\text{cm}^2$ ) increases gradually with the distance from the core of the meteorite mass outwards. (2) The content of devitrified and fan chondrules tends to increase from the core to the rim in spite of the fact that no obvious variation has been noticed in the proportion between various kinds of chondrules. (3) The outline of chondrules becomes increasingly clear in going from the core to the outer parts, which is probably accounted for by a higher degree of thermal metamorphism and

[continuation of TI-CH'IU HUA-HSUEH No 1, Mar 78 pp 13-18]

recrystallization, and therefore a higher metamorphic temperature in the inner portion than that in the outer parts. This temperature gradient is presumably a function of the buried depth (20 km), the large difference in cooling rate or the uneven temperature distribution due to heterogeneous arrangement of radioactive elements within the meteorite parent body.

AUTHOR: Yuan Ch'i-lin [5913 2790 2651]

ORG: None

TITLE: "Chondritic Structure and Texture in the Kirin Meteorite"

SOURCE: Peking TI-CH'IU HUA-HSUEH [GEOCHIMICA] in Chinese No 1, Mar 78 pp 19-24

TEXT OF ENGLISH ABSTRACT: Comparatively evident chondritic structure is observed in the Kirin [Jilin] meteorite. Chondrules range from 0.2 to 3 mm in diameter, averaging 0.6 mm. Chondrules can be divided into the following types according to the principal minerals crystallized and structure-texture characteristics: (1) Olivine chondrules. In terms of their structure they can be subdivided into porphyritic, grated, barred, sub-swirling internal flow and granular chondrules; (2) Orthopyroxene chondrules. Textural types found are fan-like, radial, parallel fibrous, porphyritic and irregular; (3) Olivineorthopyroxene chondrules; (4) Glass or devitrified chondrules; (5) Ni-Fe chondrules and (6) Troilite-olivine chondrules. Among them, porphyritic and granular olivine chondrules and various kinds of radial orthopyroxene chondrules are most common. In addition, the overlapping of two or more chondrules and chondrules coated with glassy crust have also been recognized.

The structure and texture of chondrules indicate that they originated from molten silicate droplets through rapid cooling prior to the formation of the meteorite

[continuation of TI-CH'IU HUA-HSUEH No 1, Mar 78 pp 19-24]

parent body. Rapid fusion may be induced on the surface of a few solidified chondrules by solar impulse wave or nebula lightning and, if rapid cooling followed, this would give rise to the appearance of glassy crust. Collision between chondrules may result in a variety of chondrule fragments and crystal debris. In some cases, collision is also considered to be responsible for the entrench, inclusion and overlapping textures in chondrules. After the formation of the meteorite parent body, recrystallization of chondrules may take place as a result of thermal metamorphism.

AUTHOR: HUANG Wan-k'ang [7806 1238 1660]  
HSIEH Ying-wan [6200 2019 7186]  
P'AN Ching-ming [3382 2533 6900]

ORG: None

TITLE: "Transparent Minerals in the Kirin Meteorite"

SOURCE: Peking TI-CH'IU HUA-HSUEH [GEOCHIMICA] in Chinese No 1, Mar 78 pp 25-34

TEXT OF ENGLISH ABSTRACT: Principal transparent minerals in the Kirin [Jilin] meteorite include forsterite (Fa 17.8-19.5), orthopyroxenes (mainly Fs 14.1-15.3), clinopyroxenes (clinobronzite, diopside and pigeonite), plagioclase (An 8-12), orthoclase and whitlockite. Among the 17 accessory and minor minerals recognized are: tremolite, zircon, sodalite, calcite, siderite, moissanite, quartz, cristobalite and rutile.

The chemical composition of olivine is relatively uniform. Of pyroxenes, orthopyroxene predominates while clinopyroxenes are rare. Optical measurement indicates a limited compositional variation for orthopyroxene. Feldspars occur mainly as microcrystals and glass chondrules have mostly devitrified into crystallites, microcrystals or even to perfect crystals. The outline of chondrules is partly clear or,

[continuation of TI-CH'IU HUA-HSUEH No 1, Mar 78 pp 25-34]

in some cases, merely recognizable. The Kirin meteorite should belong to the type 4-5, basically type H 5, in accordance with the petrochemical classification suggested by W. R. van Schmus in 1967.

AUTHOR: CHAN Hsin-chih [2069 2450 1807]

ORG: None

TITLE: "Opaque Minerals in the Kirin Meteorite"

SOURCE: Peking TI-CH'IU HUA-HSUEH [GEOCHIMICA] in Chinese No 1, Mar 78 pp 35-40

TEXT OF ENGLISH ABSTRACT: Opaque minerals in the Kirin [Jilin] meteorite include kamacite, taenite, troilite, chromite, ilmenite, schreibersite, pyrite, pyrrhotite, chalcopryite, sphalerite and graphite. Five of the above-mentioned minerals have been discussed in more detail in terms of optical and physical properties, chemical composition, coexisting relationship and the order of crystallization.

It is indicated from this study that, with the exception of a small amount of Ni-Fe chondrules, silicate minerals are the first to crystallize followed by chromite, ilmenite at the early stage of nebula condensation, while Ni-Fe phase in the matrix is considered to be of a later origin. At the late stage of nebula condensation troilite resulted from the reaction of Ni-Fe metal with residual H<sub>2</sub>S vapor.

As indicated by the occurrence of coarse grained Ni-Fe metal, the recrystallization

[continuation of TI-CH'IU HUA-HSUEH No 1, Mar 78 pp 35-40]

of troilite and the apparent Neumann lines in kamacite, it is expected that opaque minerals in the Kirin meteorite have undergone different degrees of thermal and impact metamorphism.

AUTHOR: LU Huan-chang [4151 3562 4545]  
YU Tz'u-mei [0827 5412 3780]  
SHIH Chi-hsi [2457 4949 6932]

ORG: None

TITLE: "Inclusions in the Kirin Meteorite: Characteristics, Temperatures of Formation and Implications"

SOURCE: Peking TI-CH'IU HUA-HSUEH [GEOCHIMICA] in Chinese No 1, Mar 78 pp 41-45

TEXT OF ENGLISH ABSTRACT: Glass and gas inclusions have been observed in olivine and other minerals in 30 doubly polished tin sections of Kirin [Jilin] meteorites, indicating that there must have been melting and condensation stages during the process of meteorite formation. Temperatures of formation have been determined by homogenization and quenching runs, giving 1050-1200°C and 502°C for glass and gas inclusions respectively. Meanwhile, the fibrous radial crystals of pyroxene have been noticed to grow when heated over 800°C. These observations are in general agreement with the available experimental data and theoretical calculations regarding the meteorite.

AUTHOR: HSU Lien [1776 3425]  
SHAO Wen-lan [6730 2429 5695]

ORG: None

TITLE: "Preliminary Study on the Organic Pigments and Porphyrin Compounds in the Kirin Meteorite"

SOURCE: Peking TI-CH'IU HUA-HSUEH [GEOCHIMICA] in Chinese No 1, Mar 78 pp 46-50

TEXT OF ENGLISH ABSTRACT: This paper describes the extraction of porphyrin compounds and related pigments from the Kirin [Jilin] meteorite with 9:1 (v/v) benzene and methanol mixture. After removal of sulfur and asphalts the hexane solution of the extract is eluted through a silica gel chromatographic column with hexane, benzene and acetone successively. Nickel porphyrin, vanadium porphyrin and chlorins are found in the benzene eluate and their contents are estimated to be 0.008 ppm, 0.006 ppm and 0.002 ppm respectively. The aliphatic hydrocarbons in the meteorite are estimated to be approximately 74 pp. The results are summarized and discussed.

AUTHOR: YEN Tso-p'eng [7051 0146 7720]  
HU Ch'eng-i [5170 2051 0001]  
SU Neng-hsien [4725 5174 0341]

ORG: None

TITLE: "Amino Acids in the Kirin Meteorite"

SOURCE: Peking TI-CH'IU HUA-HSUEH [GEOCHIMICA] in Chinese No 1, Mar 78 pp 51-56

TEXT OF ENGLISH ABSTRACT: Amino acids have been separated from and identified in the Kirin [Jilin] meteorites Nos I and II by gas-liquid chromatography. Eight kinds of amino acid, i.e.,  $\alpha$ -alanine, valine, glycine, isoleucine,  $\beta$ -alanine, leucine, proline, and threonine, are observed in Meteorite No I. Ten varieties of amino acids, including serine, hydroproline, lysine, etc., are noticed from Meteorite No II. A brief discussion is given to the origin of these acids.



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LAN Fang-yu [5663 2455 2589]  
SU Neng-hsien [4725 5174 0341]  
CHOU Hung-ming [0719 7703 0682]

ORG: None

TITLE: "Hydrocarbons, Purine and Pyrimidine Compounds in the Kirin Meteorite"

SOURCE: Peking TI-CH'IU HUA-HSUEH [GEOCHIMICA] in Chinese No 1, Mar 78 pp 57-63

TEXT OF ENGLISH ABSTRACT: Preliminary investigation was carried out on the Kirin [Jilin] meteorite for hydrocarbon- and nitrogen-bearing organic compounds. It shows that the meteorite contains 68 ppm of soluble organic matter, among which the normal alkanes amount to 0.36-0.43 ppm, with carbon number distribution ranging from C<sub>17</sub> to C<sub>31</sub>, and the aromatic hydrocarbons herein are mainly composed of poly-alkyl-substituted less condensed rings. Purine derivatives and pyrimidine have also been found. A discussion is given as to the origin of these organic substances.

AUTHOR: HSU Fen-fang [1776 5358 5364]  
CHIANG Shan-ch'un [1203 0810 2504]  
FAN Shan-fa [5400 0810 4099]  
KO Chih-ch'ang [5514 3112 1603]

ORG: None

TITLE: "Isoprenoid Compounds in the Kirin Meteorite"

SOURCE: Peking TI-CH'IU HUA-HSUEH [GEOCHIMICA] in Chinese No 1, Mar 78 pp 64-67

TEXT OF ENGLISH ABSTRACT: Isoprenoid compounds in the Kirin [Jilin] meteorite are isolated and identified by a combined chromatography-mass spectrometry. In the chromatographic part of this instrumentation, the open glass capillary is coated with SE<sub>30</sub> carrier. Chromatographic and mass spectrometric evidence of the existence of pristane and phytane in the Kirin meteorite has been presented and the possible origin of these compounds briefly discussed.

AUTHOR: CHUANG Ts'an-fu [5445 3503 3940]

ORG: None

TITLE: "Systematic Analysis of Troilite Microspecimens from Kirin Meteorite No 1"

SOURCE: Peking TI-CH'IU HUA-HSUEH [GEOCHIMICA] in Chinese No 1, Mar 78 pp 68-76

TEXT OF ENGLISH ABSTRACT: Microspecimens of troilite from the Kirin [Jilin] Meteorite No 1, weighing only 200-500 micrograms, have been determined for S, Fe, Ni and Co. The sample is first decomposed by 6 N hydrochloric acid mixed with hydroxylamine hydrochloride at room temperature. Simultaneously, tellurium ions ( $\text{Te}^{4+}$ ) are added to combine with divalent sulfur into  $\text{TeS}_2$ . Excess tellurium is determined spectrophotometrically. The sulfur content is indirectly obtained by subtracting the excess tellurium from the total amount added. After extraction and separation, each of the other elements is colorimetrically determined. The results are satisfactory.

8650

CSO: 4009

SHANGHAI MEDICINE

AUTHOR: YANG Tung-yueh [2799 2639 1971]  
CHIANG Chih-chieh [5592 4249 4634]  
LIN Shan-yen [2651 6365 8827]

ORG: YANG, CHIANG of Department of Bone Injuries, LIN of Department of Internal Medicine, Hua-shan Hospital, Shanghai First College of Medicine

TITLE: "Preliminary Report of One Case of Homo-specific Heteroplastic Transplant of Complete Knee Joint With Blood Vessels and Nerves"

SOURCE: Shanghai SHANG-HAI I-HSUEH [SHANGHAI MEDICINE] in Chinese No 5, 15 May 78 pp 1-2

ABSTRACT: In 1972, Tamai of Japan succeeded in using heteroplastic complete knee joint with blood vessels for transplant in a dog of the same species. Successful application of this technique in man has not yet been reported, however. On 26 September 1977, the authors used a complete knee joint with blood vessels and nerves of a male cadaver severed immediately after death for transplant on a worker of a masonry plant who had had his knee joint crushed three years previously, and had had artificial joints of plastics and organic glass without success. At the time of the report, the transplanted knee joint continues to regain its function, six months after the

[continuation of SHANG-HAI I-HSUEH No 5, 1978 pp 1-2]

transplant surgery. Long term effects of the technique are being observed. X-ray photos depicting the unsuccessful artificial knee joint, the injured knee and the heteroplastic knee joint being readied for transplantation, the transplanted knee joint three months after the surgery, and the transplanted knee joint four months after the surgery.

AUTHOR: None

ORG: Department of Surgery, Jui-chin Hospital, Shanghai

TITLE: "Experience in the Application of Folk Technique of Chi-ch'i District for the Treatment of Snake Bites"

SOURCE: Shanghai SHANG-HAI I-HSUEH SHANGHAI MEDICINE in Chinese No 5, 15 May 78 p 2

ABSTRACT: The folk technique involves lancing the snake bite with a sharp knife to obtain an opening the size of a rice grain and washing it repeatedly with saline water before covering it with pulverized Kuo-tung-ch'ing [*Ilex pubessens* Hook et Arn.] and *Dioscorea batatas* Dene. Internally, a pulvis mixture of 30 percent of *Dioscorea batatas* Dene, 20 percent of Ch'ing-mu-hsiang [*Arsaema consanguineum* Schott], 20 percent of *Pycnostelma chinense*, 10 percent of *Asarum heterotropoides* F. Schum. var *mandshuricum*, etc. is administered 3-4 times daily. The staff of the department adopted this technique. A total of 24 cases have been treated accordingly and all were cured from the bites of poisonous snakes. Details of the technique are described.

AUTHOR: None

ORG: Department of Osteopathy, Shanghai Municipal Sixth People's Hospital

TITLE: "Preliminary Report of Clinical Application of Compressed Load-bearing Steel Plate"

SOURCE: Shanghai SHANG-HUA I-HSUEH SHANGHAI MEDICINE in Chinese No 5, 15 May 78 pp 3-5

ABSTRACT: At present, fractures of hip and long bones are usually stabilized externally with boards or plaster; therefore, the bone cannot withstand load until the long process of healing has completed. Such undesirable after effects as local swelling, muscular atrophy, joint stiffness frequently occur to affect the functional recovery of the limb. In order to promote healing and to cause the limb to be able to bear load sooner, the department, with the help of Shanghai Institute of Metallurgy Chinese Academy of Sciences, Shanghai Institute of Iron and Steel, and Shanghai Surgical Instrument Sixth Plant, designed and made a compressed load-bearing steel plate, which has been used in 24 cases of hip, radial, and brachial fractures since August 1977. In all cases, the repaired bones were able to bear load 8-10 days after the surgery. Photos of patients, 6 days and 9 weeks following arm and hip bone repairs with the steel plate, and photos depicting the structure of the steel plate are included in the report.

AUTHOR: TAI K'o-jung [2071 0344 2051]  
YUAN Chien-hsin [5373 1696 2450]  
KAO Yu-lan [7559 3768 5695]  
CHENG Tse-k'un [6774 3419 0981]  
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WEI Shao-pin [5898 4801 2430]  
LIANG Hou-k'uan [2733 0624 1401]

ORG: All of Department of Osteopathy, Ninth People's Hospital, Shanghai  
Second College of Medicine

TITLE: "Threaded Nails Internal Fixation For the Treatment of Fracture of  
Femoral Trochanter"

SOURCE: Shanghai SHANG-HAI I-HSUEH [SHANGHAI MEDICINE] in Chinese No 5,  
15 May 78 pp 6-8

ABSTRACT: From December 1975 to June 1977, the authors used threaded nails  
to treat 49 cases of fracture of the femoral trochanters. Surgical incision  
was not needed. Intramedullary fixation with the nails was accomplished through  
skin puncture. Clinical data and treatment results of these cases are report-  
ed. Types of fractures are described with drawings, and the treatment pro-  
cedure and the threaded nails and the tools used to apply them are also des-  
cribed.

AUTHOR: None

ORG: Department of Osteopathy, Second Hospital, Second Military University  
of Medicine

TITLE: "Preliminary Understandings of the Round Saw Drilling Technique of  
Pre-cervical Approach to Surgery"

SOURCE: Shanghai SHANG-HAI I-HSUEH [SHANGHAI MEDICINE] in Chinese No 5,  
15 May 78 pp 9-10

ABSTRACT: The precervical approach to excise an intravertebral disc, a bone  
fragment, or to transplant a bone for the treatment of diseases of the cer-  
vical vertebra or paralysis due to cervical trauma has been adopted by all  
the hospitals. In the process of applying this technique, the author and  
colleagues of the department discovered that the ordinary bone drill, and  
related tools are difficult to handle and a degree of danger exists when  
they are applied to the cervical vertebra. They designed the round saw drill-  
ing technique and experimented with it in animals and cadavers before begin-  
ning to apply it clinically in June 1977. Since then, it has been applied to  
surgeries in six cases. This tool, the method of using it, and its advan-  
tages are introduced.

AUTHOR: YANG Chih-liang /2799 1807 5328/  
LOU Kuo-piao /1236 0948 1753/

ORG: Both of Department of Bone Injuries, Lung-hua Hospital, Shanghai College of Chinese Traditional Medicine

TITLE: "Relationship Between the Size of the Lumbar Vertebral Canal, Incidence of Lumbago, and Effectiveness of Treatment"

SOURCE: Shanghai SHANG-HAI I-HSUEH /SHANGHAI MEDICINE/ in Chinese No 5, 15 May 78 pp 11-12

ABSTRACT: In recent years, proper attention has been given to lumbar vertebral canal stenosis, but its diagnostic difficulties remain. Problems concerning the numerical data of the diameter of the canal of Chinese people, the difference between the sexes, and the difference, if any, from the diameter of the canal of Europeans and Americans are yet to be completely clarified. Measurements of the canal diameter of 100 cases whose x-ray photos are satisfactory are reported. There is also an analysis of the effectiveness of the treatment among the various sizes of the canal measurement for the purpose of studying the pathogenesis of lumbago and related diseases and the principles of their treatment.

AUTHOR: None

ORG: Cardiovascular Group, First Hospital, Second Military University of Medicine

TITLE: "Research and Manufacture of Artificial Spherical Bicuspid Valve and Its Clinical Application in China"

SOURCE: Shanghai SHANG-HAI I-HSUEH /SHANGHAI MEDICINE/ in Chinese No 5, 15 May 78 pp 13-17

ABSTRACT: The work for developing artificial spherical bicuspid valve began in China in 1963. On the basis of successful animal experimentation, its clinical application began in June 1965. The project was forced to discontinue by LIN Piao and the gang of four and was not revived until 1974. By February 1978, a total of 15 cases of bicuspid replacement with Chinese-made spherical artificial valve have been performed. Of the group, follow-ups disclosed eight to be still alive, 12 years to 10 months after the surgery. The death of the other cases are judged to be unrelated to the function of the artificial valve. The research process of the valve, its animal experimentation, and its clinical application are reported and analyzed.

AUTHOR: None

ORG: Shanghai Municipal Chest Hospital

TITLE: "Report of 4 Cases of Artificial Bicuspid Valve Replacement"

SOURCE: Shanghai SHANG-HAI I-HSUEH [SHANGHAI MEDICINE] in Chinese No 5,  
15 May 78 pp 18, 40

ABSTRACT: From 25 May to August 1977, artificial bicuspid valve replacements were performed for four patients of severe bicuspid disorders. The condition of the patients was stable during and after the surgery. Systolic murmur was not detected and the patients got out of the bed on the third or fourth day after the surgery. Warfarin anticoagulant was administered, beginning on the third day to lengthen the coagulin time to 1.5-2 times of normal.

AUTHOR: TING Chia-an [0002 0857 1344]  
HSIEH T'ing-huai [6200 1656 2849]

ORG: Both of Department of Surgery, Shanghai Municipal First Hospital for Prevention and Treatment of Tuberculosis"

TITLE: "Management of Several Affect Effects of Chest Surgeries and Their Understandings"

SOURCE: Shanghai SHANG-HAI I-HSUEH [SHANGHAI MEDICINE] in Chinese No 5,  
15 May 78 pp 19-21

ABSTRACT: After effects of chest surgeries discussed in the paper include severe pulmonary airleak, hypokalemic alkalosis, subglottic phlegm congestion in infants, and post-pneumectomic pneumothorax. The experience of the authors and their colleagues at the department in the management of these postoperative conditions and the lessons learned from some critical and fatal cases are introduced.

AUTHOR: T'ANG Yun~~g~~-chih [0781 3279 1807]  
MENG Hui [1322 5634]

ORG: Both of Department of Urology, Chung-hsin Hospital, Ching-an District, Shanghai

TITLE: "Understandings in the Dorsal Approach to Kidney and Upper Ureter Surgeries"

SOURCE: Shanghai SHANG-HAI I-HSUEH [SHANGHAI MEDICINE] in Chinese No 5, 15 May 78 pp 22-23

ABSTRACT: From January 1974 to December 1976, the technique of making incision in the back for ureteral and pyelic lithotomy, nephrectomy, etc. to treat ureteral lithiasis, renal lithiasis, chyluria, etc. was adopted in 31 surgical cases. This paper introduces the surgical procedure and the experience gained from its practice. Although it cannot replace the common side approach technique completely, the authors believe that these cases have proved the practical value of the dorsal approach technique and are prepared to apply it to additional types of kidney surgeries.

AUTHOR: None

ORG: Department of Pediatrics, Li-ch'un Hospital, P'u-t'o District, Shanghai

TITLE: "Treatment of 35 Cases of Infant Diarrhea With Li-k'o-hsieh"

SOURCE: Shanghai SHANG-HAI I-HSUEH [SHANGHAI MEDICINE] in Chinese No 5, 15 May 78 p 23

ABSTRACT: Crataegus pinnatifida Bge., wheat straw, Dioscorea batatas Dene., Poria cocos (Shw.) Wolf), Plantago major, Atractylodes macrocephala Koidz, ginger, and Glycyrrhiza uralensis Fisch. are treated before ground into powder to form the drug, Li-k'o-hsieh [anti-diarrhea]. Dosages for infants from three months to over one year of age are described. Of the 35 cases treated, the drug was obviously effective for 22 cases, effective for 10 cases, and not effective for 3 cases.



AUTHOR: YU Shan-ch'ang [0205 6365 2490]

ORG: None

TITLE: "Mucocutaneous Lymph Node Syndrome (MLNS): With Report of 10 Cases"

SOURCE: Shanghai SHANG-HAI I-HSUEH [SHANGHAI MEDICINE] in Chinese No 5,  
15 May 78 pp 24-28

ABSTRACT: MLNS is a disease of fever and rash of unknown origin, first reported by Kawasaki in 1942. Following years of observation, he gave it the name of acute febrile mucocutaneous lymph node syndrome and reported 50 such cases in 1967. Since its discovery in Japan, cases have also been reported from Hawaiian of the United States, South Korea, Greece, and Canada. A few cases have also been discovered in China in recent years. This paper is a summary report of the 10 cases treated at the pediatric departments of several hospitals in Shanghai. Clinical data of the ten cases are analyzed.

AUTHOR: None

ORG: Pediatric Hospital, Shanghai First College of Medicine

TITLE: "Analysis of Data of 38 Cases Mistakenly Diagnosed as Infant Viral Hepatitis"

SOURCE: Shanghai SHANG-HAI I-HSUEH [SHANGHAI MEDICINE] in Chinese No 5,  
15 May 78 pp 29-32

ABSTRACT: At present, there is not yet a technique of specific diagnosis for viral hepatitis. A rise of serum glutamic propionic transaminase (SGPT) is regarded as the important basis for its diagnosis, but some other diseases may also manifest abnormal liver function. A mistaken diagnosis may cause these patients to be hospitalized in the hepatitis ward to result in cross-infection. From 16 August 1971 to 15 August 1976, the hospital treated 1205 cases of infant hepatitis. Of these, 38 cases were finally diagnosed as diseases other than hepatitis through clinical observation, laboratory examination, x-ray, or surgery, amounting to an error rate of 3.15 percent. The corrected diagnoses of the 38 cases, their clinical manifestations and liver function changes, and other related data are reported and analyzed.

AUTHOR: HUANG Wei-min /7806 0251 3046/  
HSU Chia-ch'i /1776 1367 7784/  
CH'EN Ko /7115 7245/  
WANG I-ch'ien /3769 0122 0241/

ORG: All of Shanghai Municipal Sixth People's Hospital

TITLE: "Auricular Tachycardia of Multiple Origin"

SOURCE: Shanghai SHANG-HAI I-SHEUH /SHANGHAI MEDICINE/ in Chinese No 5,  
15 May 78 pp 33-35

ABSTRACT: Auricular tachycardia of multiple origin is a special type of atrial arrhythmia. In the past 3 years, the hospital treated 13 such cases. The general clinical data, the diagnostic standard, the condition of serum electrolytes, the application of digitalis type drugs, and the EKG signs of this group are reported and discussed.

AUTHOR: CHU Sung-shan /2612 2646 1472/

ORG: None

TITLE: "A New Bronchial Asthma Drug--Chlorodemethasone Dipropionate Mist"

SOURCE: Shanghai SHANG-HAI I-HSUEH /SHANGHAI MEDICINE/ in Chinese No 5  
15 May 78 p 35

ABSTRACT: Measured by weight, the anti-inflammatory action of chlorodemethasone is about 500 times that of dexamethasone, but in the mist form, the general absorption is very little. It does not suppress adrenocortical function when it is used in the regular dosage and has very little general effect; therefore, this hormone can have localized action and become a great advancement in the treatment of bronchial asthma. This paper reports its clinical effectiveness, its dosages, methods of its application, and its side effects.

AUTHOR: None

ORG: Teaching and Research Group of Microbiology, Teaching and Research Group of Biochemistry, Shanghai First College of Medicine

TITLE: "Immune RNA of HBsAg Immune Guinea pig and Observation of Vitro Specific Passive Immunity to Human White Cells"

SOURCE: Shanghai SHANG-HAI I-HSUEH [SHANGHAI MEDICINE] in Chinese No 5, 15 May 78 pp 36-38

ABSTRACT: B hepatitis is closely related to the immuno condition of an individual. Those, whose body fluid and cell immunity is normal, usually recover smoothly. Those, whose immuno function is low, especially in case of low cell immunity, often develop the disease into the chronic state. Under the present condition of lacking specific drug for hepatitis, improving the immunity level of the patient seems to be a reasonable technique. Immune RNA (iRNA) carries the immuno information and has no limit in species; therefore, using iRNA to transfer immuno information for producing specific passive immunity is a technique worthy of consideration. The authors extracted iRNA from the spleen and lymph nodes of HBsAg immune guinea pigs and determined the activity of specific passive immunity it transfers to white cells of

[continuation of SHANG-HAI I-HSUEH No 5, 15 May 78 pp 36-38]

healthy persons in vitro with LAI. The result of the experiment indicates that it is entirely possible to use specific iRNA to treat chronic hepatitis. The materials and the method used in the experiment are reported; the results are analyzed and discussed.

AUTHOR: CHENG K'ang-ch'iao [6774 1660 2890]

ORG: Department of Urological Surgery, First Hospital, Shanghai Municipal Bureau of Textile Industries

TITLE: "Improved Surgical Technique for Tying Urethra and Urinary Bladder"

SOURCE: Shanghai SHANG-HAI I-HSUEH [SHANGHAI MEDICINE] in Chinese No 5, 15 May 78 pp 39-40

ABSTRACT: There are many surgical methods for treating pressure type urinary incontinence, but the major objective of these methods is always to lengthen the length of the urethra and to enlarge the angle between the urinary bladder and the urethra to correct the pathological cause of urinary incontinence. In the course of performing the surgery for 10 patients in connection with vaginal repair, the author and colleagues simplified the technique and improved it so that chance of post-operative complications was greatly reduced. The improved technique and the clinical data of the 10 cases are reported.

AUTHOR: None

ORG: Shanghai Municipal Hericium Evimaccus Cooperative Group

TITLE: "Observation of Short Term Effects of Hericium Evimaccus Tablets on 227 Cases of Ulcers and Chronic Gastritis"

SOURCE: Shanghai SHANG-HAI I-HSUEH [SHANGHAI MEDICINE] in Chinese No 5, 15 May 78 p 41

ABSTRACT: The tablet is made from Hericium evimaccus (Bull. ex Fr.) Pers. by the group with the cooperation of Shanghai Chinese Traditional Pharmaceutical Third Plant. It has been used for oral administration to treat 227 cases of ulcers and chronic gastritis in a dozen hospitals in Kiangsu Province and Shanghai Municipality. Diagnoses of all cases had been verified through gastroscopy and x-ray. The short term effectiveness of the drug is analyzed in the paper.

AUTHOR: LIN Kuei [2651 6311]  
LIN Shou-ch'eng [2651 1343 6134]

ORG: LIN Kuei of Department of Radiology, LIN Shou-ch'eng of Department of Surgery, Chung-shan Hospital, Shanghai First College of Medicine

TITLE: "Phrenic Hernia Caused by Childbirth"

SOURCE: Shanghai SHANG-HAI I-HSUEH [SHANGHAI MEDICINE] in Chinese No 5, 15 May 78 p 42

ABSTRACT: In the afternoon of 19 May 1977, the patient suddenly suffered extremely severe abdominal pain and nausea and vomiting; at night she gave birth to her first baby. Abdominal pain, vomiting, and shortness of breath continued, however. On the 22, breathing became difficult and she was in shock. She was transferred to Chung-shan Hospital for emergency surgery. A large quantity of fluid and food residue was discovered in the abdominal cavity, as well as a large rupture in the diaphragm. In spite of various emergency rescue measures, the condition of blood poisoning failed to improve; the patient died.

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TITLE: "Advancement in Transplant of Bone and Joint With Blood Vessels"

SOURCE: Shanghai SHANG-HAI I-HSUEH [SHANGHAI MEDICINE] in Chinese No 5, 15 May 78 pp 50-53

ABSTRACT: Clinical application of surgical transplantation of bone and joint with blood vessels attached is a new development of microsurgery of the past decade. The use of microscope and other optical amplification devices to assist the vision of the surgeon greatly improved the precision of the surgical technique to create a favorable condition for bone and joint graft with blood vessels. This paper introduces briefly the history of bone and joint transplantation and the develop of the technique to the present level. A large number of reference materials of Western origin are given. This report is presented in connection with the successful knee joint transplant performed in September 1977 at Hua-shan Hospital of Shanghai First College of Medicine.

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TITLE: "Progress in Experimental Research on Leukocyte Adherence Inhibition Test"

SOURCE: Shanghai SHANG-HAI I-HSUEH [SHANGHAI MEDICINE] in Chinese No 5,  
15 May 78 pp 54-61

ABSTRACT: The technique of vitro determination of cell immunity is being developed very rapidly in recent years, but its clinical application is often limited by such factors as complicated procedure, too many needed tools, a large quantity of blood needed for the test, and the test being time consuming. In 1972, Halliday et al developed the leukocyte adherence inhibition test LAI to provide preliminary conditions for tumor immunology research. The theory and the methods of LAI, and its realm of application are briefly introduced.

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TITLE: "Determination of Human T lymphocytes--Sheep Red Cell Rose Cup Test"

SOURCE: Shanghai SHANG-HAI I-HSUEH [SHANGHAI MEDICINE] in Chinese No 5,  
15 May 78 pp 62-64

ABSTRACT: Lymphocytes are immuno active cells of the human body. According to their different surface markings and functions, they may be divided into the three groups of T cells, B cells, and K cells. The different groups of lymphocytes perform different functions in immuno reaction; therefore, the determination of the number, distribution, and function of the 3 groups of cells may help to clarify the pathogenic mechanism and immuno mechanism of some diseases. At present, the best method of determining the number of T lymphocytes is the sheep red cell rose cup test. The theory, method, significance, and application of this test are briefly introduced.

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